A new species of African Noctuidae: *Euxoa (Euxoa) haeberleorum* sp. nov. (Lepidoptera: Noctuidae, Noctuinae)

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Abstract: An *Euxoa* species new to science was discovered in the Mt. Elgon area, Kenya. Systematically it is placed tentatively next to *Euxoa (Euxoa) canariensis* REBEL, 1902.

Eine neue afrikanische Eule: *Euxoa (Euxoa) haeberleorum* sp. nov. (Lepidoptera: Noctuidae, Noctuinae)

Zusammenfassung: 1993 erhielt der Erstautor über das Ungarische Naturhistorische Museum 8 Exemplare einer offensichtlich noch unbeschriebenen *Euxoa*-Art, die sich als weitläufig verwandt mit der von den Kanarischen Inseln über ganz Nordafrika verbreiteten *Euxoa (Euxoa) canariensis* REBEL, 1902 erwies. Sowohl die männlichen wie die weiblichen Genitalapparate weisen aufgrund ihres innerhalb der Gattung relativ ursprünglichen Aufbaues auf die Zugehörigkeit zu einer relativ früh abgespaltenen Entwicklungslinie hin.

Introduction

More than 300 species of the genus *Euxoa* HÜBNER, 1821 are known. All but a few species of this genus occur in the temperate holarctic zone.

Kenya in East Central Africa is far out of the traditional borders of the Palaearctic region but, in the high mountains of the Afrotropical region, a few species of *Euxoa* are known. Other noctuine representatives of the groups of *Agrotis* OCHSENHEIMER, 1816 and *Diarsia* HÜBNER, [1821] for instance are present in higher elevations throughout the Old World tropics.

Because of the poor scientific exploration status of most areas of the African Continent, of course also concerning the study of Noctuidae, it is still possible to gain new and surprising records. The following description is a result of such a surprise.

Euxoa (Euxoa) haeberleorum sp. nov.

Holotype ♂: "Kenya, Mt. Elgon N.P., Kimothon river, 3200 m, 11.-22. I.1992 (A. LOBMEYER)", ex coll. L. W. R. KOBES in coll. TM Budapest.

Paratypes: 3 ♂♂, 4 ♀♀, Kenya, same data as holotype, gen. preps. 2597 (♂) and 2598 (♀) M. FIBIGER, in colls. L. W. R. KOBES and M. FIBIGER.

The new species is dedicated to the professor of forest engineering of the University of Göttingen, Dr. Siegfried HAEBERLE and his wife.

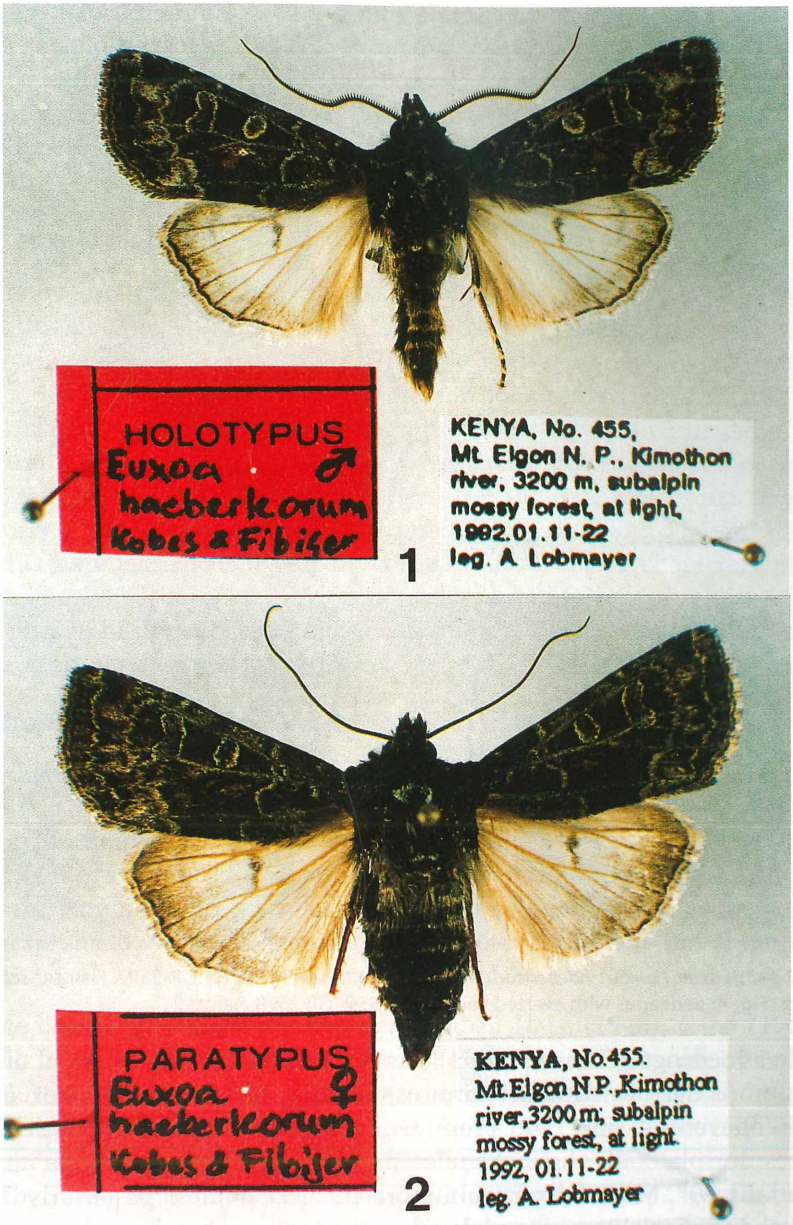
Locus typicus: Kenya, Mt. Elgon National Park, Kimothon river, 3200 m.

Description

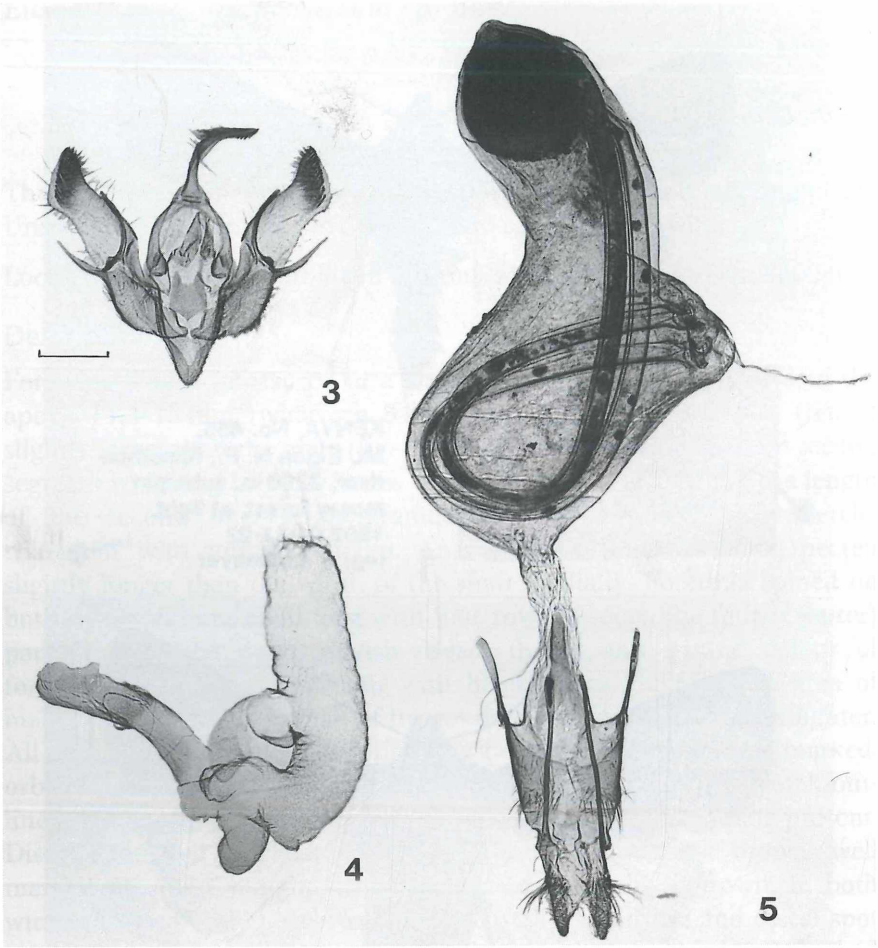
Forewing length (measured in a straight line from the wing base to the apex): 14.5-15 mm (wingspan 34-40 mm), female with 18 mm (fig. 2) slightly larger than the male (fig. 1). Labial palpi porrect, first and second segment with long hair-like scales ventrally; third segment half the length of the second one. Frons granulated, with a prominent tubercle, triangular with rounded angles. Antenna of male bipectinate, pecten slightly longer than the width of the shaft medially. Foretibia spined on both sides. Mid and hind tarsi with four rows of setae, the fourth (outer) partial. Abdomen dark, greyish. Head, thorax and ground colour of forewing dark brown, suffused with black scales. Subterminal area of male creamy white. First half of fringes dark brown, the outer half lighter. All crosslines well marked, whitish, black outlined. Stigmata well marked, orbicular and reniform dark brown, white outlined, claviform black outlined. Hindwing whitish, darker towards termen. Marginal shade present. Discal spot well marked, elongated. Terminal line dark brown, well marked by outer margin. Underside of forewing light brownish, both wings suffused with dark brown scales costally. Reniform and discal spot present, blackish. Postmedian line on both wings blackish, well marked between veins.

Diagnosis of genitalia

The male armature (fig. 3): Valves equally broad throughout, invaginated on both margins before corona. The corona bears 20 spines. Sacculus narrow and rounded. Clavus absent. Saccular extension narrow basally, slightly shorter than clasper. The latter without pubescence. Juxta broad, only a little longer than wide. Uncus prominent, spatulated, pointed at tip, covered with long hair-like setae ventrally and dorsally. Aedeagus and everted vesica (fig. 4): Vesica more than twice as long and twice as



Figs. 1–2: *Euxoa (Euxoa) haeberleorum* sp. n. Fig. 1: ♂, holotype. Fig. 2: ♀, paratype.



Figs. 3–5: *Euxoa (Euxoa) haeberleorum* sp. n., genitalia. **Fig. 3:** ♂, GP 2597 FIBIGER, scale = 1 mm. **Fig. 4:** aedeagus with everted vesica. **Fig. 5:** ♀, GP 2598 FIBIGER.

wide as aedeagus. The vesica projects dorso-laterally. The subbasal diverticulum is narrow, without cornutus, directed towards the apex of aedeagus on ventral side. The prominent additional subbasal diverticulum arises dorsolaterally, light granulated at the top. The vesica tube angles ventrally 90°. Medial diverticulum broad based, pointed posteriorly. Two apical diverticula present on left side.

Female genitalia (fig. 5): Ovipositor pointed, clothed with many short setae, subbasally a row of 22 long setae. Posterior apophyses 2½ times

longer than the anterior. The eighth abdominal segment with relatively long setae posteriorly. The length of the sclerotised plates in the wall of ductus bursae half the length of ductus. The ventral plate rounded at tip, slightly shorter than the dorsal one. Corpus bursae long, slightly bent. Appendix bursae positioned medially. Ductus seminalis arises ventro-laterally.

Systematic placement

Both the armature, the everted vesica and female genitalia are surprisingly different from any other known *Euxoa* from the Holarctic region in the following character states: the 120° angle between aedeagus and vesica tube; the shape of sacculus; the basally narrow saccular extension; the absent clavus; the shape and direction of the subbasal diverticulum; the ventrally right- angle bent vesica; the two apical diverticula; the position and number of subbasal setae on ovipositor; the long setae situated posteriorly on the eighth abdominal segment; and the ventro-lateral based ductus seminalis medially to the corpus bursae. These characters place *Euxoa haeberleorum* sp. n. phylogenetically in a relatively primitive separate lineage in the subgenus *Euxoa*. Its supposed closest relative is *Euxoa (Euxoa) canariensis* Rebel, 1902.

Bionomy

The habitat of *Euxoa haeberleorum* sp. n. is in subalpine mountain, mossy forest at an altitude of 3200 m. Mt. Elgon extends to 4321 m altitude, while Mt. Kenya reaches 5199 m. Mt. Elgon and Mt. Kenya (and Mt. Kilimanjaro) are of volcanic origin, while the Western Moon Peaks (Mt. Ruwenzori) are not. The geological age is from Precambrium as is the whole African shield, with rather recent volcanic eruptions in the equatorial area.

Some botanical information can be found in Dale (1940), Carr (1965), Milne & Milne (1968) and Beck et al. (1987): The vegetation of equatorial African mountains is divided into several altitudinal vegetation belts which can also be applied to Mt. Elgon: up to 1675 m savanna, to 2300 m mountain rain forest with predominant tree ferns, to 2900 m the zone of bamboo (e.g., *Arundinaria alpina*), to 3600 m *Hypericum* sp., trees such as *Hagenia abyssinica*, sclerophyllous vegetation (*Alchemilla* sg.), Zone of lichen covered heath (*Erica arborea, Erica excelsa* and *Erica trimera elgonensis*), *Lycopodium* meadows and tussock grasslands. The zone of subalpine

and alpine mattes is dominated by giant forms of *Senecio* and *Lobelia*, among them some species are rare and endemic: *Senecio johnstonii elgonensis* and *Lobelia elgonensis*.

The type material of the new species was all recorded at light (generator-run) in January, between the 11th and 22nd

Distribution

At the moment, *Euxoa haeberleorum* sp. n. is only known from the type locality.

Acknowledgements

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